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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/810,687

03/29/2004

Boris Ginzburg

P-6582-US

1263

27130 7590 03/22/2007
EITAN, PEARL, LATZER & COHEN ZEDEK LLP
10 ROCKEFELLER PLAZA, SUITE 1001
NEW YORK, NY 10020

EXAMINER

GELIN, JEAN ALLAND

ART UNIT

PAPER NUMBER

2617

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/22/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/810,687	Applicant(s) GINZBURG ET AL.	
	Examiner Jean A. Gelin	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 10-15, 22-24, 29, 32 and 33 is/are rejected.
- 7) ☒ Claim(s) 5-11, 16-21, 25-28, 30-31, 34-35 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 12-15, and 32-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Li et al. (US 2005/0141459).

Regarding claims 1, 12, and 32, Li teaches selecting, based on a predetermined criterion related to a successful transmission of a data packet, one of at least first and second protection mechanisms to protect said data packet (i.e., RTS and CTS symbols can be transmitted in such a way to protect long data packet from collision [0037], [0038], and [0049]).

Regarding claims 2, 13, and 33, Li teaches selecting to modulate said data packet using a first modulation type and to protect said data packet using said first protection mechanism (MIMO or OFDM modulation and RTS protection [0032]-[0038], and [0052]), to modulate said data packet using said first modulation type and to protect said data packet using said second protection mechanism (MIMO or OFDM modulation and CTS protection [0037], and [0049]), or to modulate said data packet using a second modulation type (i.e., SDMA modulation [0034] and [0056]).

Regarding claims 3, 14, Li teaches said first modulation type comprises orthogonal frequency division multiplexing, and wherein said second modulation type comprises direct sequence spread spectrum/complementary code keying ([0037], [0038], [0052], and [0060]).

Regarding claims 4, 15, Li teaches wherein said first protection mechanism comprises a request-to-send/clear-to-send protection mechanism, and wherein said second protection mechanism comprises a clear-to-send-to-self protection mechanism ([0037], [0038], and [0049]).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 22-24, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (US 2005/0141459) in view of Li et al. (US 2005/0146470).

Regarding claims 22, 29, Li (459) teaches wireless device comprising: a controller able to select, based on a predetermined criterion related to a successful transmission of a data packet, one of at least first and second protection mechanisms to protect said data packet (i.e., RTS and CTS symbols can be transmitted in such a way to protect long data packet from collision [0037], [0038], and [0049]). Li (459) further teaches the use of more than one antenna to transmit data packets (see, access STAT

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104, [0018]-[0019]), and typically, more than one access STA 102 are in the system allowing users to transfer information in packets data between them.

Li (459) teaches the use of more than one antenna to transmit data packets, but Li (459) fails to teach one or more omni-directional antennas able to transmit said data packet.

However, the preceding limitation is known in the art of communications. Li (470) teaches two omni-directional antennas are mounted on a laptop computer to provide spatial diversity to combat multipath fading ([0001]). Li (470) teaches multiple sectored antennas forms omni-directional antenna, the access point uses directional antenna, and the mobile station uses a plurality of sectored antennas to transmit packet on particular sub-bands ([0024]-[0025]). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to implement the technique of Li (470) within the system Li (459) in order that the combination of various sectors may cover a radiation pattern of 0-360 degrees as an effective omni-directional antenna, and provide an antenna system that significantly improves the performance of devices operating in a WLAN network.

Regarding claims 23, Li (459) in view of Li (470) teaches all the limitations above. Li further teaches selecting to modulate said data packet using a first modulation type and to protect said data packet using said first protection mechanism (MIMO or OFDM modulation and RTS protection [0032]-[0038], and [0052]), to modulate said data packet using said first modulation type and to protect said data packet using said second protection mechanism (MIMO or OFDM modulation and CTS protection [0037], and

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[0049]), or to modulate said data packet using a second modulation type (i.e., SDMA modulation [0034] and [0056]).

Regarding claims 24, Li (459) in view of Li (470) teaches all the limitations above. Li further teaches wherein said first protection mechanism comprises a request-to-send/clear-to-send protection mechanism, and wherein said second protection mechanism comprises a clear-to-send-to-self protection mechanism ([0037], [0038], and [0049]).

Allowable Subject Matter

5. Claims 5-11, 16-21, 25-28, 30-31, and 34-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

El Batt	US 2003/0152086	08/14/2003
Stephen et al.	US 2005/0032478	02/10/2005
Sugar et al.	US 2002/0061031	05/23/2002
Hortenstus et al.	US 6,252,854	06/26/2001
Tsien et al.	US 2005/0128970	06/16/2005
Choi et al.	US 6,978,151	12/20/2005

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean A. Gelin whose telephone number is (571) 272-7842. The examiner can normally be reached on 9:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

J. Gelin
March 17, 2007

JEAN GELIN
PRIMARY EXAMINER

A handwritten signature in cursive script that reads "Jean Gelin". The signature is written in dark ink and is positioned below the printed name and title.

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PTO/SB/08A (10-96)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet	1	of	2
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Complete if Known

Application Number	10/810,687
Filing Date	March 29, 2004
First Named Inventor	GINZBURG, Boris
Group Art Unit	2661
Examiner Name	Not yet known
Attorney Docket Number	P-6582-US

U.S. PATENT DOCUMENTS

[illegible]

FOREIGN PATENT DOCUMENTS

[illegible]

**Examiner
Signature**

Date
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/810,687
				Filing Date	March 29, 2004
				First Named Inventor	GINZBURG, Boris
				Group Art Unit	2661
(use as many sheets as necessary)				Examiner Name	Not yet known
Sheet	2	of	2	Attorney Docket Number	P-6582-US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (where appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
JG	C	DAJI QIAO and SUNGHYUN CHOI, "Goodput Enhancement of IEEE 802.11a Wireless LAN via Link Adaption", in Proc-IEEE ICC' 2001, Helsinki, Finland, June 2001, pp. 1995-2000	<input type="checkbox"/>
	D	JIM GEIER, "Improving WLAN Performance with RTS/CTS", http://www.80211-planet.com/tutorials/article.php/1445641	<input type="checkbox"/>
	E	JIM GEIER, "Improving WLAN Performance with Fragmentation", http://www.80211-planet.com/tutorials/article.php/1468331	<input type="checkbox"/>
	F	JIM GEIER, "Sizing Up Your WLAN", http://www.80211-planet.com/tutorials/article.php/992011	<input type="checkbox"/>
	G	Matthew S. Gast, "802.11 Wireless Networks" The Definitive Guide, O'Reilly 2002	<input type="checkbox"/>
	H	Bob O'Hara and Al Petrick, "The IEEE 802.11 Handbook, A Designers Companion" IEEE 1999	<input type="checkbox"/>
	I	IEEE Std 802.11b-1999, Supplement to IEEE Standard for Information Technology - Telecommunications and information exchange between systems - Local and metropolitan area networks - Specific requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications: Higher-Speed Physical Layer Extension in the 2.4 GHz Band	
	J	IEEE Std 802.11g-2003, IEEE Standard for Information Technology - Telecommunications and information exchange between systems - Local and metropolitan area networks - Specific requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications Amendment 4: Further Higher Data Rate Extension in the 2.4 GHz Band	<input type="checkbox"/>

Examiner Signature	<i>Jean Gehin</i>	Date Considered	2/2/07
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Notice of References Cited	Application/Control No. 10/810,687	Applicant(s)/Patent Under Reexamination GINZBURG ET AL.	
	Examiner Jean A. Gelin	Art Unit 2617	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2005/0141459	06-2005	Li et al.	370/334
*	B	US-6,252,854	06-2001	Hortensius et al.	370/252
*	C	US-2002/0061031	05-2002	Sugar et al.	370/466
*	D	US-2005/0032478	02-2005	Stephens et al.	455/067.11
*	E	US-2003/0152086	08-2003	El Batt, Tamer	370/400
*	F	US-2005/0128970	06-2005	Tsien et al.	370/315
*	G	US-6,978,151	12-2005	Choi et al.	455/522
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	J	US-			
	K	US-			
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
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